AMENDMENTS TO THE CLAIMS

This listing of Claims shall replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1.   (Original) A method for providing antialiased memory access, comprising:

receiving a request to access a memory address; and

determining if the memory address is within a virtual frame buffer and, if so, performing the following:

transforming the memory address into at least one physical address within a frame buffer utilized for antialiasing, wherein said frame buffer is a single memory for containing data of a plurality of subpixels corresponding to a pixel of said virtual frame buffer; and

accessing data of a subpixel at the at least one physical address within the frame buffer.

2.   (Currently Amended) A method as recited in Claim 1 further comprising accessing data at the memory address provided the memory address is not within said virtual frame buffer[[:]] .

3.   (Original) A method as recited in Claim 1, wherein the virtual frame buffer comprises a predefined memory range of a graphics memory.

4.   (Original) A method as recited in Claim 1, wherein the memory address is received from a central processing unit (CPU).

5.	(Original) A method as recited in Claim 4, further comprising providing the CPU with a pitch value of the frame buffer.

6.	(Original) A method as recited in Claim 5, further comprising the CPU calculating a physical address within the frame buffer using the pitch value of the frame buffer as the pitch of the virtual frame buffer.

7.	(Original) A method as recited in Claim 1, wherein said plurality of subpixels corresponding to said pixel of said virtual frame buffer have physical addresses that are nearby each other.

8.	(Original) A method as recited in Claim 7, wherein said physical addresses are also based on a base physical address which corresponds to said memory address.

9.	(Original) A method for providing antialiased memory read access comprising:

receiving a request to read a memory address;

determining whether the memory address is within a virtual frame buffer;

reading data at the memory address when the memory address is outside the virtual frame buffer;

transforming the memory address into at least one physical address within a frame buffer utilized for antialiasing when the memory address is within the virtual frame buffer, wherein said frame buffer is a single memory for containing data of a plurality of subpixels corresponding to a pixel of said virtual frame buffer; and

reading a subpixel value at the at least one physical address within the frame buffer.

10. (Original) A method as recited in Claim 9, further comprising providing the subpixel value to a central processing unit (CPU).

11. (Original) A method as recited in Claim 10, further comprising providing the CPU with a pitch value of the frame buffer.

12. (Original) A method as recited in Claim 11, further comprising the CPU calculating a physical address within the frame buffer using the pitch value of the frame buffer as the pitch of the virtual frame buffer.

13. (Original) A method as recited in Claim 9, wherein the virtual frame buffer includes a predefined memory range of a graphics memory.

14. (Original) A method as recited in Claim 9, wherein said plurality of subpixels corresponding to said pixel of said virtual frame buffer have physical addresses that are nearby each other and are also based on a base physical address which corresponds to said memory address.

15. (Original) A computer system comprising a memory coupled to said bus wherein said memory contains instructions for implementing a computerized method of providing antialiased memory read access, said method comprising:
    receiving a request to read a memory address;
    determining whether the memory address is within a virtual frame buffer;

reading data at the memory address when the memory address is outside the virtual frame buffer;

transforming the memory address into a plurality of physical addresses within a frame buffer utilized for antialiasing when the memory address is within the virtual frame buffer, each physical address storing a respective subpixel value related to a specific pixel of said virtual frame buffer and wherein said frame buffer is a single memory space for containing data associated with a plurality of subpixels for each pixel of said virtual frame buffer;

reading the plurality of subpixel values at the plurality of physical addresses within the frame buffer; and

combining the subpixel values to generate a pixel value for the specific pixel.

16. (Original) A system as recited in Claim 15 wherein said method further comprises providing the pixel value to a central processing unit (CPU).

17. (Original) A system as recited in Claim 15, wherein said combining comprises blending the subpixel values into a single color value.

18. (Original) A system as recited in Claim 16, wherein said method further comprises:
providing the CPU with a pitch value of the frame buffer; and
the CPU calculating a physical address within the frame buffer using the pitch value of the frame buffer as the virtual frame buffer pitch.

19. (Original) A system as recited in Claim 15, wherein the virtual frame buffer includes a predefined memory range of a graphics memory.

20. (Original) A system as recited in Claim 15, wherein said plurality of subpixels corresponding to each pixel of said virtual frame buffer have physical addresses that are nearby each other and are also based on a base physical address which corresponds to a memory address of said pixel of said virtual frame buffer.

21. (Original) A method for providing antialiased memory write access comprising:

receiving a request to write a data value to a memory address;

determining whether the memory address is within a virtual memory buffer;

transforming the memory address into a plurality of physical addresses within a frame buffer utilized for antialiasing when the memory address is within the virtual memory buffer, wherein said frame buffer is a single memory space for containing data associated with a plurality of subpixels for each pixel of said virtual frame buffer and wherein said plurality of physical addresses relate to a plurality of subpixels corresponding to a pixel of said virtual frame buffer that is located at said memory address; and

writing the data value to the plurality of physical addresses within the frame buffer.

22. (Original) A method as recited in Claim 21, further comprising writing the data value to the memory address when the memory address is outside the virtual memory buffer.

23. (Previously Presented) A method as recited in Claim 21, wherein the virtual memory buffer includes a predefined memory range of a graphics memory.

24. (Previously Presented) A method as recited in Claim 23, wherein a base address of the predefined memory range is the same as a base address of the frame buffer.

25. (Original) A method as recited in Claim 21, further comprising:

   providing a CPU with a pitch value of the frame buffer; and

   the CPU calculating a physical address within the frame buffer using the pitch value of the frame buffer as the pitch of the virtual memory buffer.

26. (Cancelled)

27. (Original) A method as recited in Claim 21, wherein said plurality of subpixels corresponding to each pixel of said virtual frame buffer have physical addresses that are nearby each other and are also based on a base physical address which corresponds to a memory address of said pixel of said virtual frame buffer.

28. (Previously Presented) A method for reading a frame buffer comprising:

   receiving an address corresponding to a pixel;

   transforming the received address into multiple subpixel addresses;

   reading at least two subpixels from the frame buffer using at least two of the multiple subpixel addresses, wherein the frame buffer comprises a plurality of pixels, wherein each pixel comprises a plurality of subpixels; and

blending the at least two subpixels to create a pixel value for said pixel.

29.   (Previously Presented) A method as recited in Claim 28 further comprising:

supplying the pixel value as if it were a pixel value at the received address.

30.   (Previously Presented) A method for writing a frame buffer comprising:

receiving an address and a pixel value corresponding to a pixel;

transforming the received address into multiple subpixel addresses;

writing the pixel value to a frame buffer as multiple subpixel values using the multiple subpixel addresses, wherein said frame buffer comprises a plurality of pixels wherein each pixel comprises a plurality of subpixels.

31.   (Previously Presented) A method as recited in Claim 30 further comprising:

modifying at least one of said multiple subpixel values in said frame buffer based upon a pixel value of a surrounding pixel.

32.   (Original) A method for supplying a virtual frame buffer to a computer program, comprising:

supplying a base address and buffer size information to the computer program, the base address and the buffer size information corresponding to a virtual frame buffer;

receiving an address in the virtual frame buffer from the computer program;

transforming the received address into at least one subpixel address, the subpixel address being an address into a frame buffer which is a single memory storing data of a plurality of subpixels corresponding to each pixel of said virtual frame buffer;

reading at least two subpixels from the frame buffer using the subpixel address;

blending the at least two subpixels to create a pixel value;

supplying the created pixel value to the computer program as if it were a pixel value located at the received address in the virtual frame buffer; and

wherein the computer program does not directly access the frame buffer.

33.   (Original) A method as recited in Claim 32, wherein the computer program is an operating system.

34.   (Original) A method as recited in Claim 32, wherein the computer program is a software driver.

35.   (Original) A method as recited in Claim 32, wherein the computer program is an application program.

36.   (Original) A method as recited in Claim 32, wherein the base address of the virtual frame buffer is the same as a base address of the frame buffer.

37.   (Original) The method as recited in Claim 36, further comprising supplying a pitch to the computer program, the pitch corresponding to the virtual frame buffer and being equal to a pitch of the frame buffer, wherein the base

address of the virtual frame buffer is the same as a base address of the frame buffer.

38.   (Original) The method as recited in Claim 32 wherein said plurality of subpixels corresponding to each pixel of said virtual frame buffer comprise nearby physical memory addresses within said frame buffer.

39.   (Original) A computer system comprising a memory coupled to said bus wherein said memory contains instructions for implementing a computerized method of supplying a virtual frame buffer to a computer program, comprising:

supplying a base address and buffer size information to the computer program, the base address and the buffer size information corresponding to a virtual frame buffer;

receiving an address in the virtual frame buffer from the computer program;

receiving a pixel value;

transforming the received address into at least one subpixel address, the subpixel address being an address in a frame buffer, wherein said frame buffer is a single memory comprising a plurality of subpixels corresponding to each pixel of said virtual frame buffer and wherein said plurality of subpixels comprise nearby physical addresses;

writing the pixel value as at least two subpixels values into the frame buffer using the subpixel address; and

wherein the computer program does not directly access the frame buffer.

40.   (Original) A system as recited in Claim 39, wherein the computer program is an operating system.

41. (Original) A system as recited in Claim 39, wherein the computer program is a software driver.

42. (Original) A system as recited in Claim 39, wherein the computer program is an application program.

43. (Original) A system as recited in Claim 39, wherein the base address of the virtual frame buffer is the same as a base address of the frame buffer.

44. (Currently Amended) A system as recited in Claim 39, wherein said method further comprises supplying a pitch to the computer program, the pitch corresponding to the virtual frame buffer and being equal to a the pitch of the frame buffer, wherein the base address of the virtual frame buffer is the same as a base address of the frame buffer.